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Hydrology and Earth System Sciences Discussions

Interactive comment on "A novel algorithm with heuristic information for extracting drainage networks from raster DEMs" *by* W. Yang et al.

Anonymous Referee #1

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This manuscript aims at presenting a new algorithm to compute drainage networks based on DEMs and deals especially with the issue of depressions along flow pathways. The proposed approach uses information from not only the directly neighboring cells but also more distant cells to better allow for determination of a flow path through pits and flats. The authors claim that the approach is novel.

While this is an interesting topic and I in general find the approach reasonable, I am surprised to see this manuscript in its current form submitted to HESS. I reviewed the very same manuscript recently for a GIS journal. Both I and the other reviewer had (similar) substantial concerns, but the manuscript is, besides for a few words, exactly the same as already submitted and reviewed previously for this other journal. I am happy to review this manuscript again, but first the authors should do their part of the

work. Please note that submitting a previously rejected manuscript to another journal without making any changes, implies an unnecessary use of the time of (busy) editors and reviewers. Please help to avoid this in the future.

To summarize the previous reviews the major issues were (and still are)

1) Lack of any quantitative analysis. The qualitative discussion of some selected examples is not fully convincing.

2) Poorly described methods. Both reviewers raised several questions which still are unanswered.

3) Lack of a literature review.

Based on the manuscript, both reviewers were not convinced about the novelty of the approach. The new approach might be a large improvement over existing algorithms, but this needs to be demonstrated.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 7, 441, 2010.